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# Mortality in the United States, 2019

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## Key findings

### Data from the National Vital Statistics System

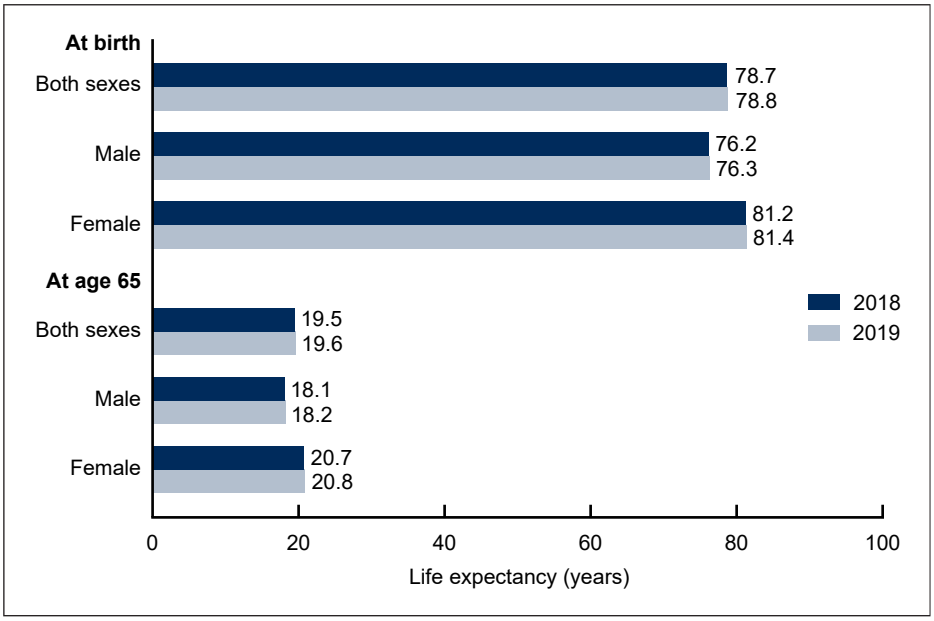
- Life expectancy for the U.S. population in 2019 was 78.8 years, an increase of 0.1 year from 2018.
- The age-adjusted death rate decreased by 1.2% from 723.6 deaths per 100,000 standard population in 2018 to 715.2 in 2019.
- The 10 leading causes of death in 2019 remained the same as in 2018, although kidney disease, the eighth leading cause and influenza and pneumonia, the ninth in 2019, switched ranks.
- Age-specific death rates decreased from 2018 to 2019 for age groups 45–54, 65–74, 75–84, and 85 and over.
- The infant mortality rate in 2019 of 558.3 infant deaths per 100,000 live births did not change significantly from the rate in 2018.

This report presents final 2019 U.S. mortality data on deaths and death rates by demographic and medical characteristics. These data provide information on mortality patterns among U.S. residents by variables such as sex, age, race and Hispanic origin, and cause of death. Life expectancy estimates, age-specific death rates, 10 leading causes of death, and 10 leading causes of infant death were analyzed by comparing 2019 and 2018 final data (1).

## How long can we expect to live?

In 2019, life expectancy at birth was 78.8 years for the total U.S. population—an increase of 0.1 year from 78.7 years in 2018 (Figure 1). For males, life expectancy changed 0.1 year from 76.2 in 2018 to 76.3 in 2019. For females, life expectancy increased 0.2 year from 81.2 years in 2018 to 81.4 in 2019.

Figure 1. Life expectancy at birth and age 65, by sex: United States, 2018 and 2019




NOTE: Access data table for Figure 1 at: https://www.cdc.gov/nchs/data/databriefs/db395-tables-508.pdf#1.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

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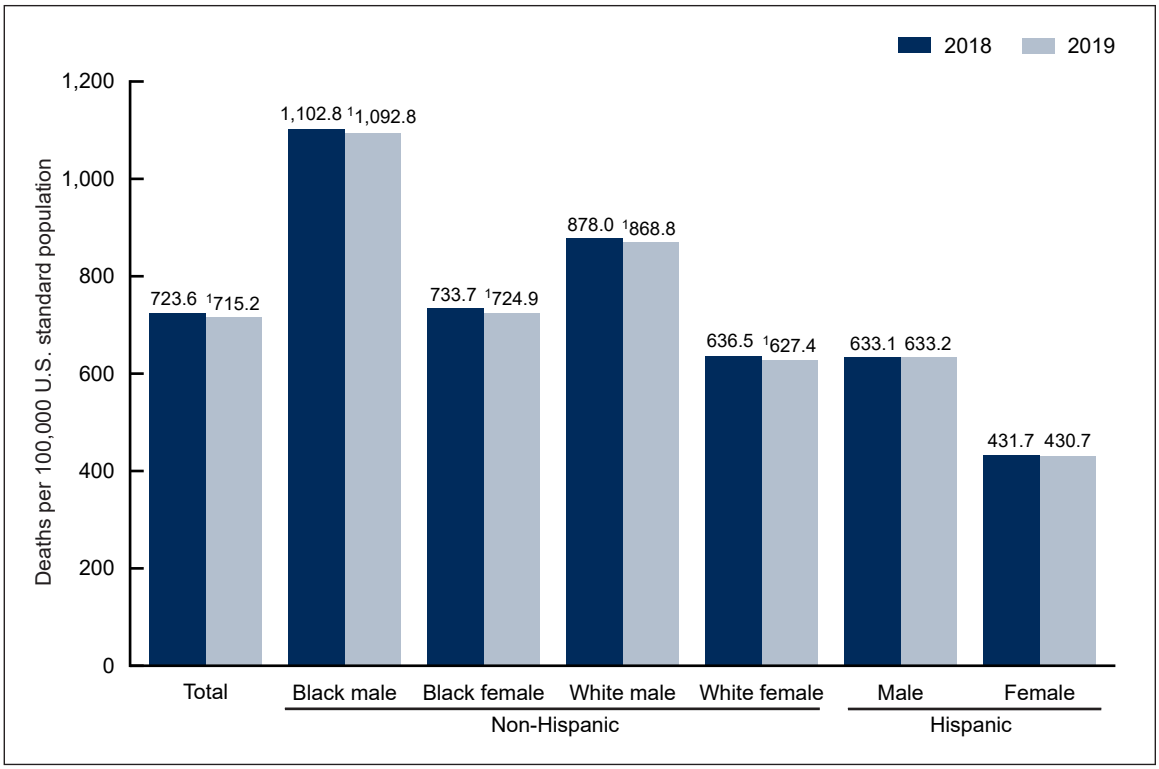
In 2019, the difference in life expectancy between females and males was 5.1 years, an increase of 0.1 year from 2018.

In 2019, life expectancy at age 65 for the total population was 19.6 years, an increase of 0.1 year from 2018. For males, life expectancy at age 65 increased 0.1 year from 18.1 in 2018 to 18.2 in 2019. For females, life expectancy at age 65 increased 0.1 year from 20.7 years in 2018 to 20.8 in 2019. The difference in life expectancy at age 65 between females and males was 2.6 years, unchanged from 2018.

## What are the age-adjusted death rates for race-ethnicity-sex groups?

The age-adjusted death rate for the total population decreased 1.2% from 723.6 per 100,000 standard population in 2018 to 715.2 in 2019 (Figure 2). Age-adjusted death rates decreased for non-Hispanic black males (0.9%), non-Hispanic black females (1.2%), non-Hispanic white males (1.0%), and non-Hispanic white females (1.4%). Rates did not change significantly for Hispanic males and females from 2018 to 2019.

Figure 2. Age-adjusted death rates, by race and ethnicity and sex: United States, 2018 and 2019



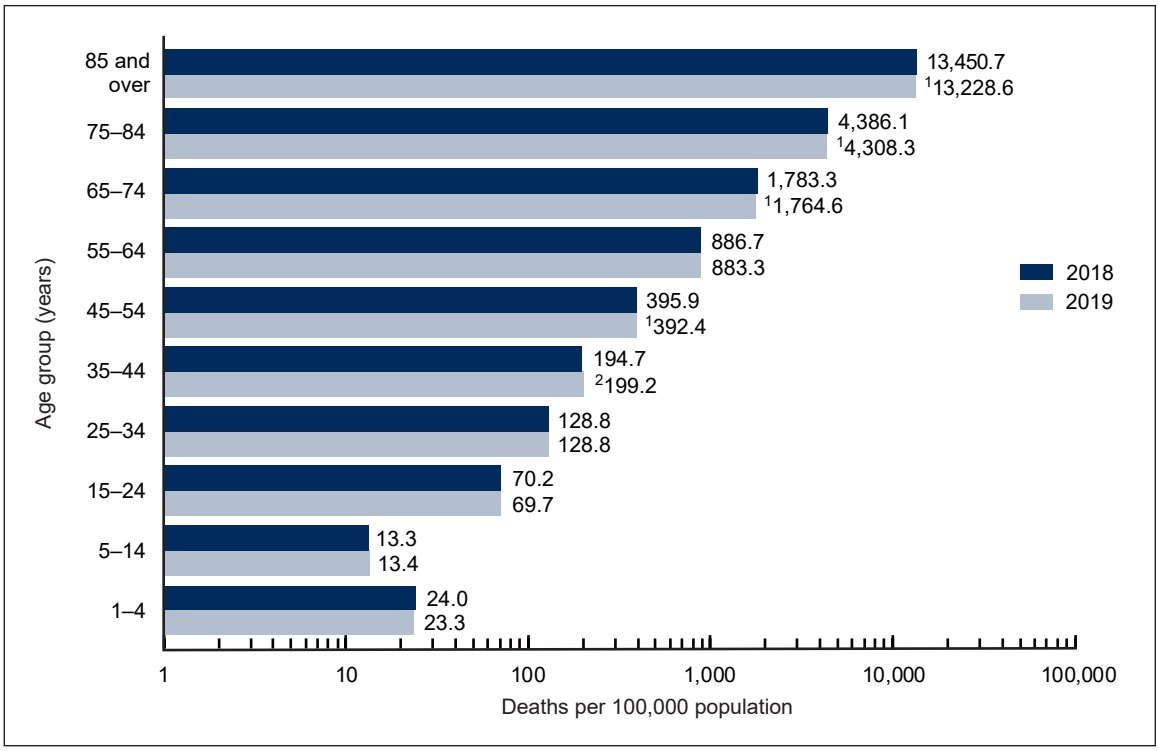

[1]Statistically significant decrease in age-adjusted death rate from 2018 to 2019 ($p < 0.05$).
NOTES: Race groups are single race. Access data table for Figure 2 at: https://www.cdc.gov/nchs/data/databriefs/db395-tables-508.pdf#2.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

## Did age-specific death rates in 2019 change from 2018 among those aged 1 year and over?

Between 2018 and 2019, death rates decreased 1.8% for age group 75–84 (from 4,386.1 deaths per 100,000 population in 2018 to 4,308.3 in 2019), 1.7% for age group 85 and over (13,450.7 to 13,228.6), 1.0% for age group 65–74 (1,783.3 to 1,764.6), and 0.9% for age group 45–54 (395.9 to 392.4) (Figure 3). Death rates increased 2.3% for age group 35–44 (194.7 to 199.2).

Rates for age groups 1–4, 5–14, 15–24, 25–34, and 55–64 did not change significantly between 2018 and 2019.

Figure 3. Death rates for ages 1 year and over: United States, 2018 and 2019



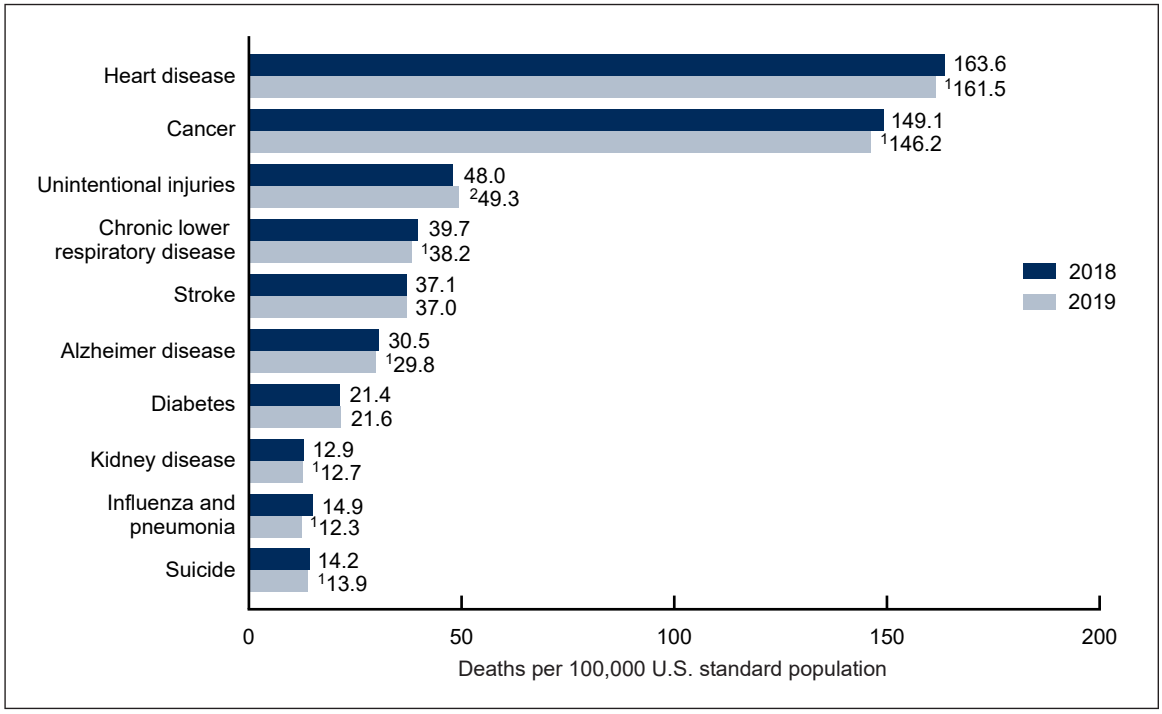

[1]Statistically significant decrease in age-specific death rate from 2018 to 2019 ($p < 0.05$).
[2]Statistically significant increase in age-specific death rate from 2018 to 2019 ($p < 0.05$).
NOTES: Rates are plotted on a logarithmic scale. Access data table for Figure 3 at: https://www.cdc.gov/nchs/data/databriefs/db395-tables-508.pdf#3.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

## What are the death rates for the 10 leading causes of death?

In 2019, the 10 leading causes of death (heart disease, cancer, unintentional injuries, chronic lower respiratory diseases, stroke, Alzheimer disease, diabetes, kidney disease, influenza and pneumonia, and suicide) remained the same as in 2018, although two causes exchanged ranks (Figure 4). Influenza and pneumonia, the eighth leading cause in 2018, became the ninth leading cause in 2019, while kidney disease, the ninth leading cause in 2018, became the eighth leading cause in 2019 (1). Causes of death are ranked according to number of deaths (1). The 10 leading causes of death accounted for 73.4% of all deaths in the United States in 2019.

From 2018 to 2019, age-adjusted death rates decreased for 7 of 10 leading causes of death and increased for 1. The rate decreased 1.3% for heart disease (from 163.6 in 2018 to 161.5 in 2019), 1.9% for cancer (149.1 to 146.2), 3.8% for chronic lower respiratory diseases (39.7 to 38.2), 2.3% for Alzheimer disease (30.5 to 29.8), 1.6% for kidney disease (12.9 to 12.7), 17.4% for influenza and pneumonia (14.9 to 12.3), and 2.1% for suicide (14.2 to 13.9). The rate increased 2.7% for unintentional injuries (48.0 to 49.3). Rates for stroke and diabetes did not change significantly.

Figure 4. Age-adjusted death rates for the 10 leading causes of death in 2019: United States, 2018 and 2019



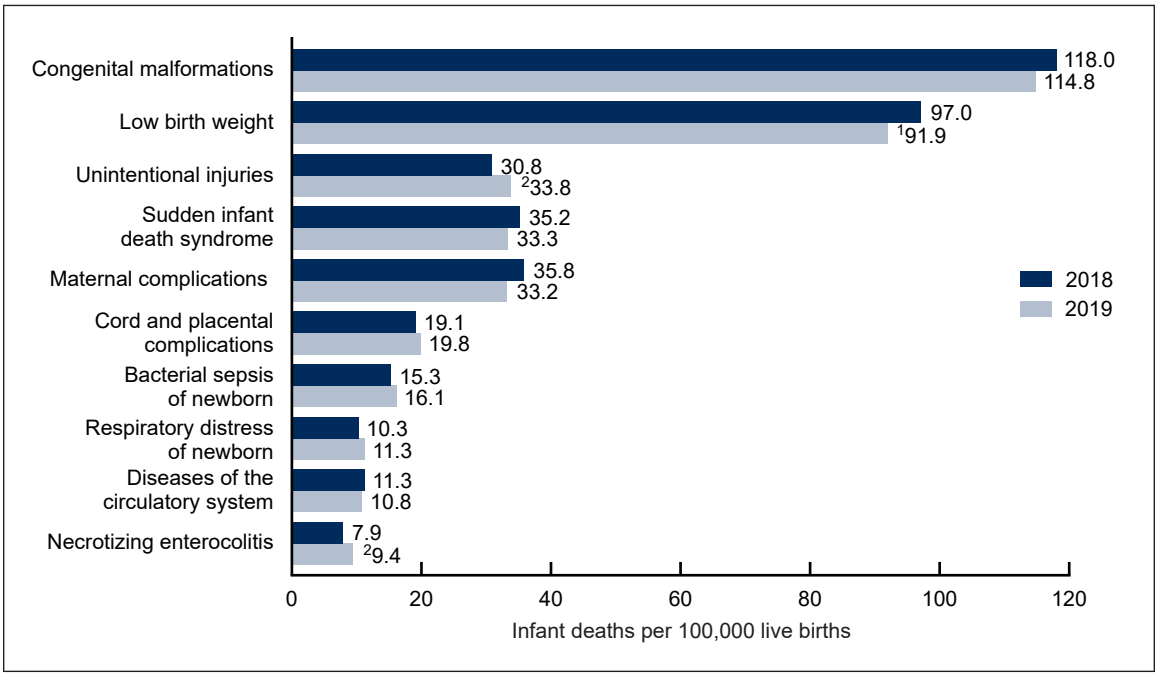

[1]Statistically significant decrease in age-adjusted death rate from 2018 to 2019 ($p < 0.05$).
[2]Statistically significant increase in age-adjusted death rate from 2018 to 2019 ($p < 0.05$).
NOTES: A total of 2,854,838 resident deaths were registered in the United States in 2019. The 10 leading causes of death accounted for 73.4% of all deaths in the United States in 2019. Causes of death are ranked according to number of deaths. Rankings for 2018 data are not shown. Data table for Figure 4 includes the number of deaths for leading causes. Access data table for Figure 4 at: https://www.cdc.gov/nchs/data/databriefs/db395-tables-508.pdf#4.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

## What are the mortality rates for the 10 leading causes of infant death?

The infant mortality rate (IMR) is the ratio of infant deaths to live births in a given year. The change in the IMR from 566.2 infant deaths per 100,000 live births in 2018 to 558.3 in 2019 was not statistically significant.

Causes of infant death are ranked according to the number of infant deaths (1). The 10 leading causes of infant death in 2019 (congenital malformations, low birth weight, unintentional injuries, sudden infant death syndrome, maternal complications, cord and placental complications, bacterial sepsis of newborn, respiratory distress of newborn, diseases of the circulatory system, and necrotizing enterocolitis) accounted for 67.1% of all infant deaths in the United States. Several changes occurred for the rankings of the leading causes of infant death between 2018 and 2019 (Figure 5). Maternal complications, the third leading cause in 2018, became the fifth leading cause in 2019, while unintentional injuries, the fifth leading cause in 2018, became the third leading cause in 2019. Diseases of the circulatory system, the eighth leading cause in 2018, became the ninth leading cause in 2019, while respiratory distress of newborn, the ninth leading cause in 2018, became the eighth leading cause in 2019. Neonatal hemorrhage, the 10th leading cause in 2018, dropped from among the top leading causes of infant death in 2019 and was replaced by necrotizing enterocolitis of newborn. The IMR decreased 5.3% from 97.0 in 2018 to 91.9 in 2019 for low birth weight. The IMR increased 9.7% from 30.8 in 2018 to 33.8 in 2019 for unintentional injuries and 19.0% from 7.9 to 9.4 for necrotizing enterocolitis of newborn. Mortality rates for other leading causes of infant death did not change significantly.

Figure 5. Infant mortality rates for the 10 leading causes of infant death in 2019: United States, 2018 and 2019




[1]Statistically significant decrease in mortality rate from 2018 to 2019 ($p < 0.05$).
[2]Statistically significant increase in mortality rate from 2018 to 2019 ($p < 0.05$).
NOTES: A total of 20,921 deaths occurred in children under age 1 year in the United States in 2019, with an infant mortality rate of 558.3 infant deaths per 100,000 live births. The 10 leading causes of infant death in 2019 accounted for 67.1% of all infant deaths in the United States. A total of 21,467 infant deaths occurred in 2018, with an infant mortality rate of 566.2 infant deaths per 100,000 live births. Rankings for 2018 data are not shown. Causes of death are ranked according to number of deaths. Data table for Figure 5 includes the number of deaths under age 1 year for leading causes of infant death. Access data table for Figure 5 at: https://www.cdc.gov/nchs/data/databriefs/db395-tables-508.pdf#5.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

## Summary

In 2019, a total of 2,854,838 resident deaths were registered in the United States—15,633 more deaths than in 2018. From 2018 to 2019, the age-adjusted death rate for the total population decreased 1.2%, and life expectancy at birth increased 0.1 year. Age-specific death rates between 2018 and 2019 decreased for age groups 45–54, 65–74, 75–84, and 85 and over, and increased for age group 35–44. Age-adjusted death rates decreased for non-Hispanic black males and females and non-Hispanic white males and females.

The 10 leading causes of death in 2019 remained the same as in 2018, although 2 causes exchanged ranks. Influenza and pneumonia, the eighth leading cause in 2018, became the ninth leading cause in 2019, while kidney disease, the ninth leading cause in 2018, became the eighth leading cause in 2019 (1). Age-adjusted death rates decreased for seven leading causes and increased for one. Life expectancy at birth increased 0.1 year from 78.7 years in 2018 to 78.8 in 2019, largely because of decreases in mortality from cancer, chronic lower respiratory diseases, influenza and pneumonia, suicide, and stroke.

In 2019, a total of 20,921 deaths occurred in children under 1 year, which was 546 fewer infant deaths than in 2018. The IMR decreased for 1 (low birth weight) of the 10 leading causes of infant death and increased for 2 (unintentional injuries and necrotizing enterocolitis of newborn).

## Definitions

Cause of death: Based on medical information—including injury diagnoses and external causes of injury—entered on death certificates filed in the United States. This information is classified and coded in accordance with the *International Statistical Classification of Diseases and Related Health Problems, 10th Revision* (ICD–10) (2).

Death rates: For 2019, based on population estimates for July 1, 2019, that are consistent with the April 1, 2010, census. These population estimates (as well as population figures for the 2010 census) are available on the CDC WONDER website (3). Age-adjusted death rates are useful when comparing different populations because they remove the potential bias that can occur when the populations being compared have different age structures. The National Center for Health Statistics (NCHS) uses the direct method of standardization; see Technical Notes of "Deaths: Final Data for 2018" (1) for more information.

Infant mortality rate (IMR): Computed by dividing the number of infant deaths in a calendar year by the number of live births registered for that same time period. IMR is the most widely used index for measuring the risk of dying during the first year of life.

Leading causes of death: Ranked according to the number of deaths assigned to rankable causes (4).

Life expectancy: The expected average number of years of life remaining at a given age. It is denoted by $e_x$, which means the average number of subsequent years of life for someone now aged $x$. Life expectancy estimates for 2019 are based on a methodology first implemented with 2008 final mortality data (5). Life expectancies for 2018 and 2019 are estimated using final Medicare data.

## Data source and methods

The data shown in this report reflect information collected by NCHS for 2018 and 2019 from death certificates filed in all 50 states and the District of Columbia and compiled into national data known as the National Vital Statistics System. Death rates shown in this report are calculated based on postcensal population estimates as of July 1, 2018, and July 1, 2019, which are consistent with the April 1, 2010, census. Differences between death rates were evaluated using a two-tailed *z* test.

The race and Hispanic-origin groups shown in this report follow the 1997 standards and differ from the bridged-race categories shown in reports for data years prior to 2018 (1).

## About the authors

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